

# Mineral Industry Surveys

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## LEAD IN SEPTEMBER 2004

Domestic mine production, based on the net quantity of lead recovered from concentrate, was 36,900 metric tons (t) in September, according to the U.S. Geological Survey. This was a slight increase compared with that of August. Mine production for the first 9 months of 2004 was 321,000 t, down by 7% compared with that of the same period in 2003. Secondary refinery production (94,800 t) decreased by 2% in September, and reported consumption (111,000 t) decreased by 3% from that of the previous month. Secondary production for the first 9 months of 2004 was up by 1% compared with production in the first 9 months of 2003, and reported consumption rose by about 2% for the same period.

According to the Platts Metals Week published quotations, the average North American producer price increased to 58.98 cents per pound in September, 3% above the August price, and the average London Metal Exchange Ltd. (LME) cash price increased to \$934.92 per metric ton, a 2% rise from the August price. These are significantly higher prices compared with September 2003 averages, up about 35% and 79%, respectively. The LME September prices ranged from a low of \$875.00 per metric ton (September 2) to a high of \$987.00 per metric ton (September 28); in September, the lead prices were below \$900 for only 4 trading days. The LME lead stocks rose by 17,450 t to 53,075 t, the first monthly increase of the year.

The supply of lead remained tight in the United States during September, while demand in Europe increased during the month. LME lead stocks went over 50,000 t owing to a 20,000-t delivery of Australian metal into the Singapore LME warehouse, but stocks were still historically low. At the October meeting of the International Lead and Zinc Study Group, the study group revised upwards its estimate of the Western World lead deficit for 2004 (CRU International Ltd., 2004a). Antaike (2004a) estimated that China's 2004 refined lead production would be about 1.74 million metric tons (Mt), an increase of 10% from the 2003 production. Antaike (2004b) also reported that according to the Chinese Nonferrous Metals Industry Association, 819 lead and zinc enterprises in China produced metal valued at \$3.7 billion for the period of January

to July 2004. This was an increase of 43.9% over the value for the comparable January to July 2003 period.

The Chinese Government's policy to curb credit has made it difficult for lead smelters to obtain letters of credit to purchase concentrates, resulting in a rise of spot treatment charges (TCs). September spot TCs in the \$80s in China were still lower than those in Europe, but when an additional freight charge of \$10–15/t for shipping from the United States to China is added, the European smelters appear more competitive. In recent years, some smelters have invested in the capability of their operations to handle an increased percentage of secondary feed. These smelters may not choose to increase the portion of primary feed if and when trade patterns in lead concentrates shift (CRU International Ltd., 2004b).

China Minmetals Corporation is negotiating a proposed purchase of Noranda Ltd., Canada. Minmetals is reportedly proceeding with due diligence in evaluating Noranda's assets as part of its right to exclusive negotiation with Noranda and its primary shareholder, Canada's Brascan Corporation (CRU International Ltd., 2004b; Platts Metals Week, 2004).

China's Non-ferrous Metal Industry's Foreign Engineering & Construction Company, Ltd. recently negotiated and signed a cooperation memorandum with Iran's ITOK Engineering and Technological Company to develop and mine a large lead-zinc-silver deposit. The deposit has reserves containing 15.7 Mt of zinc, 5 Mt of lead, and 11,000 t of silver; the ores are mainly carbonate minerals, and the average grade is over 9% base metals (Antaike, 2004c, and CRU International Ltd., 2004c).

The National Defense Stockpile aggregated cash disposal (sale) of lead in September, under the monthly Basic Ordering Agreement DLA-Lead-005, was 3,581 t (3,947 short tons) for an approximate value of \$3.5 million. Sales of lead for the entire fiscal year of 2004 (October 1, 2003, through September 30, 2004) totaled 51,329 t (56,580 short tons) (Defense National Stockpile Center, 2004).

## Update

At the end of October, LME stocks had decreased by 3,875 t to 49,200 t. LME lead prices in October ranged from a low on

October 14 of \$873.00 per metric ton to a high on October 23 of \$1,018.00 per metric ton; in October, lead was priced below \$900.00 per metric ton for 10 trading days, whereas for 11 trading days the price was above \$900.00 (of those, 4 days traded at or above \$1,000.00).

## References Cited

Antaïke, 2004a, Market Commentary—Lead in September: Antaïke, China Metal Market - Lead & Zinc, Tin Monthly, No. 95, October, p. 3-4.

Antaïke, 2004b, Industrial News—Chinese lead and zinc industry witnesses good profits: Antaïke, China Metal Market—Lead & Zinc, Tin Monthly, No. 95, October, p. 11.

Antaïke, 2004c, Industrial News—NFC to cooperate with Iran to exploit the world[']s fourth largest Pb-Zn-Ag mine: Antaïke, China Metal Market—Lead & Zinc, Tin Monthly, No. 95, October, p. 12.

CRU International Ltd., 2004a, CRU Monitor—Lead: CRU International Ltd., October, 12 p.

CRU International Ltd., 2004b, CRU Monitor—Lead & Zinc Concentrates: CRU International Ltd., October 12 p.

Defense National Stockpile Center, 2004, Stockpile announces lead sales for September 2004: Fort Belvoir, VA, Defense National Stockpile Center news release, October 5, 1 p.

Platts Metals Week, 2004, Minmetals wants Noranda as platform for growth: Platts Metals Week, v. 75, no. 40, October 4, p. 13.

TABLE 1  
SALIENT LEAD STATISTICS IN THE UNITED STATES<sup>1</sup>

(Metric tons, lead content, unless otherwise specified)

	2003		2004		
	Year <sup>p</sup>	January - September	August	September	January - September
Production:					
Mine (recoverable)	449,000	345,000 <sup>r</sup>	36,900 <sup>r</sup>	36,900	321,000 <sup>r</sup>
Primary refinery	245,000	NA	NA	NA	NA
Secondary refinery:					
Reported by smelters/refineries	1,140,000	827,000 <sup>r</sup>	94,100	92,600	836,000
Estimated	--	8,360 <sup>r</sup>	950	935	8,450
Recovered from copper-base scrap <sup>c</sup>	11,400	11,300	1,250	1,250	11,300
Total secondary	1,150,000	847,000 <sup>r</sup>	96,300	94,800	856,000
Stocks, end of period:					
Primary refineries	NA	NA	NA	NA	NA
Secondary smelters and consumers	107,000	83,300 <sup>r</sup>	66,200 <sup>r</sup>	66,000	66,000
Imports for consumption:					
Ore and concentrate	6	3 <sup>r</sup>	--	NA	1 <sup>2</sup>
Refined metal	175,000	128,000 <sup>r</sup>	14,500	NA	125,000 <sup>2</sup>
Consumption:					
Reported	1,390,000	1,010,000 <sup>r</sup>	114,000	111,000	1,030,000
Undistributed <sup>c</sup>	--	31,300 <sup>r</sup>	3,540	3,430	31,800
Total	1,390,000	1,040,000 <sup>r</sup>	118,000	114,000	1,060,000
Exports:					
Ore and concentrate	253,000	148,000 <sup>r</sup>	53,800	NA	182,000 <sup>2</sup>
Bullion	593	576 <sup>r</sup>	5	NA	64 <sup>2</sup>
Wrought and unwrought lead	123,000	75,500 <sup>r</sup>	5,170	NA	58,600 <sup>2</sup>
TEL/TML preparations, based on lead compounds	517	445 <sup>r</sup>	11	NA	565 <sup>2</sup>
Exports (gross weight): Scrap	92,800	63,100 <sup>r</sup>	4,280	NA	37,500 <sup>2</sup>
Platts Metals Week North American producer price (cents per pound)	43.76	43.64 <sup>r</sup>	57.30	58.98	53.29

<sup>c</sup>Estimated. <sup>p</sup>Preliminary. <sup>r</sup>Revised. NA Not available. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits, except prices; may not add to totals shown.

<sup>2</sup>Includes data for January - August only; September data were not available at time of publication.

TABLE 2  
MONTHLY AVERAGE LEAD PRICES

	North American producer price cents/lb	LME		Sterling exchange rate dollars/£
		\$/metric ton	£/metric ton	
2003:				
September	43.78	520.90	322.44	1.615476
December	44.30	691.69	394.89	1.751605
Year	43.76	514.62	313.88	1.634750
2004:				
July	54.09	938.85	509.19	1.843800
August	57.30	920.77	505.85	1.820255
September	58.98	934.92	521.23	1.793671

Source: Platts Metals Week.

TABLE 3  
CONSUMPTION OF PURCHASED LEAD-BASE SCRAP<sup>1</sup>

(Metric tons, gross weight)

Item	Stocks	Net	Consumption	Stocks
	August 31, 2004	receipts		September 30, 2004
Battery-lead	13,000	96,200	97,100	12,200
Soft lead	W	W	W	W
Drosses and residues	1,880	1,430	1,470	1,850
Other <sup>2</sup>	1,300	2,120	2,160	1,260
Total	16,200	99,800	101,000	15,300
Percent change from preceding month	XX	-1.3	+0.7	-5.8

W Withheld to avoid disclosing company proprietary data; included with "Other." XX Not applicable.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes solder, common babbitt, antimonial lead, cable covering, type metals, and other lead-base scrap not elsewhere classified.

TABLE 4  
LEAD, TIN, AND ANTIMONY RECOVERED  
FROM LEAD-BASE SCRAP IN AUGUST 2004<sup>1</sup>

(Metric tons)

Product recovered	Secondary metal content		
	Lead	Tin	Antimony
Soft and calcium lead	68,400	--	--
Remelt lead	W	W	W
Antimonial lead	23,700	W	W
Other <sup>2</sup>	W	W	--
Total lead-base	92,600	39	335

W Withheld to avoid disclosing company proprietary data; included in "Total."  
-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits.

<sup>2</sup>Includes cable lead, lead-base babbitt, solder, type metals, and other products.

TABLE 5  
CONSUMPTION OF LEAD IN THE UNITED STATES<sup>1</sup>

(Metric tons, lead content)

Use	2003		2004		
	Year <sup>b</sup>	January - September <sup>c</sup>	August	September	January - September
Metal products:					
Ammunition, shot and bullets	48,800	40,400	4,330	3,950	40,000
Brass and bronze, billet and ingots	2,810	2,520	194	194	2,570
Cable covering, power and communication and calking lead, building construction	4,790	4,060	447	67	3,420
Casting metals	31,700	25,000	2,780	2,780	25,000
Sheet lead, pipes, traps and other extruded products	25,900	17,900	2,060	1,980	17,700
Solder	6,310	1,180	134	95	1,170
Storage batteries, including oxides	1,170,000	845,000	97,200	94,700	876,000
Terne metal, type metal, and other metal products <sup>2</sup>	23,200	11,400	1,510	1,260	11,600
Total metal products	1,310,000	947,000	109,000	105,000	977,000
Other oxides and miscellaneous	78,300	64,800	5,710	6,010	50,400
Total reported	1,390,000	1,010,000	114,000	111,000	1,030,000
Undistributed <sup>c</sup>	--	31,300	3,540	3,430	31,800
Grand total	1,390,000	1,040,000	118,000	114,000	1,060,000

<sup>c</sup>Estimated. <sup>b</sup>Preliminary. <sup>c</sup>Revised. -- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

<sup>2</sup>Includes lead consumed in foil, collapsible tubes, annealing, plating, galvanizing, and fishing weights.

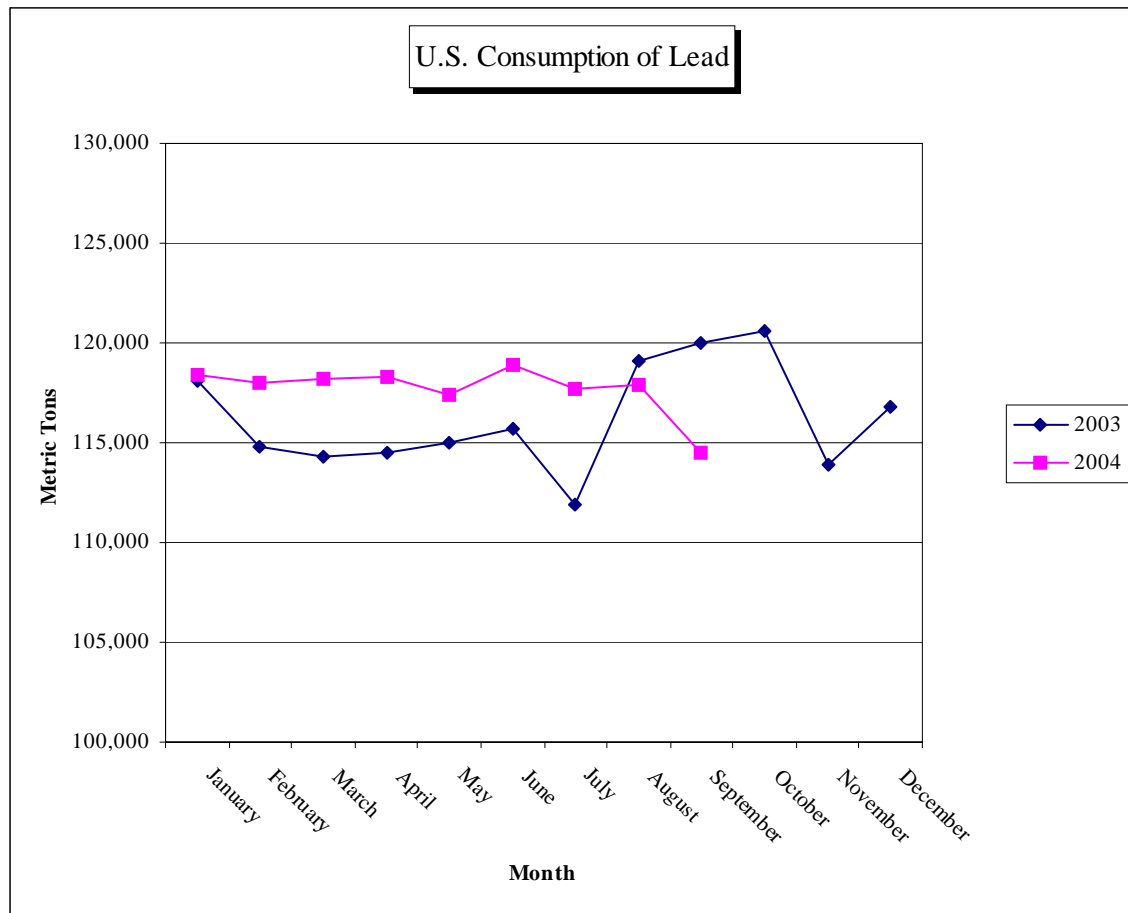


TABLE 6  
CONSUMER AND SECONDARY SMELTER STOCKS, RECEIPTS,  
AND CONSUMPTION OF LEAD<sup>1</sup>

(Metric tons, lead content)

Type of material	Stocks August 31, 2004	Net receipts	Consumption	Stocks September 30, 2004
Soft lead	33,800	63,600	63,100	34,200
Antimonial lead	16,800	28,100	28,800	16,100
Lead alloys	W	19,000	19,000	W
Copper-base scrap	W	63	51	W
Total	66,200	111,000	111,000	66,000

W Withheld to avoid disclosing company proprietary data; included in "Total."

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

TABLE 7  
U.S. EXPORTS OF LEAD, BY CLASS<sup>1</sup>

(Metric tons)

	2003		2004		
	Year	August	July	August	January - August
Lead content:					
Ore and concentrates	253,000	54,800	46,500	53,800	182,000
Bullion	593	207	7	5	64
Materials excluding scrap	123,000	28,500	5,960	5,170	58,600
TEL/TML preparations, based on lead compounds	517	36	13	11	565
Total	377,000	83,600	52,500	59,000	241,000
Gross weight: Scrap	92,800	7,140	3,130	4,280	37,500

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.

TABLE 8  
U.S. IMPORTS OF LEAD BY TYPE OF MATERIAL AND BY COUNTRY OF ORIGIN<sup>1</sup>

(Metric tons, lead content)

Type and country	General imports					Imports for consumption				
	2003		2004			2003		2004		
	Year	January -	July	August	January -	Year	January -	July	August	January -
		August			August		August			August
Base bullion:										
Argentina	5	--	--	--	--	5	--	--	--	--
Germany	1	--	--	--	--	1	--	--	--	--
Mexico	--	3	--	--	3	--	3	--	--	3
Total	6	3	--	--	3	6	3	--	--	3
Pigs and bars:										
Australia	10,100	10,100	--	--	--	107	--	2,950	931	11,200
Canada	167,000	121,000	12,800	12,400	102,000	167,000	121,000	12,800	12,400	102,000
China	1	1	--	--	2	1	1	--	--	2
Germany	--	--	41	29	281	--	--	41	29	281
Mexico	8,270	6,470	726	225	7,720	8,270	6,470	726	225	7,720
Other	259	115	737	932	4,130	259	115	737	932	4,250
Total	186,000	138,000	14,300	13,600	114,000	175,000	128,000	17,300	14,500	125,000
Grand total	186,000	138,000	14,300	13,600	114,000	175,000	128,000	17,300	14,500	125,000

-- Zero.

<sup>1</sup>Data are rounded to no more than three significant digits; may not add to totals shown.

Source: U.S. Census Bureau.